

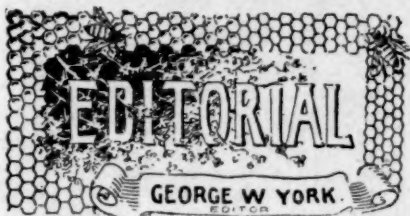
ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE PAPER IN AMERICA

Weekly, \$1 a Year. { DEVOTED EXCLUSIVELY TO BEE-CULTURE. { Sample Copy Free.

VOL. XXXIII. CHICAGO, ILL., MAR. 29, 1894. NO. 13.



Mr. Charles Nash Abbott, the originator of the *British Bee Journal*, died on March 2, 1894. Editor Cowan, of the journal named, promises further particulars in the next issue of his paper. The sad announcement was made in the issue for March 8th, the notice being received just on going to press.

Expensive Honey-Dishes.—Dr. Miller, in one of his "Stray-(ing) Straws" in *Gleanings*, says this: "Dishes prepared with honey at one of Nero's suppers are said to have cost \$160,000." All of which goes to show that Dr. Miller gets into one valuable "straw" some invaluable or priceless "honey-dishes."

"Foul Brood; Its Natural History and Rational Treatment," is the title of an interesting booklet by Dr. Wm. R. Howard, of Texas. It also contains a review of the work of others on the same subject. It is being issued at the office of the BEE JOURNAL, and will be ready to mail about April 10th. Price, postpaid, 25 cents; or clubbed with the BEE JOURNAL for one year—both together for \$1.15. Orders received now, and mailed as soon as issued.

Editor Hutchinson's March Review is mainly devoted to a discussion of the manufacture of comb foundation. It also contains charming spring and summer views of Bro. H.'s apiary. Bro. Taylor's reports of experiments in the same number we reproduce for the benefit of our readers this week, as will be noticed on page 400. The *Review* is so different from the other bee-papers, that every wide-awake bee-keeper can easily afford to take it in connection with whatever other apiarian periodical he may already be reading. We can club the *Review* with the BEE JOURNAL—both together for a whole year—for only \$1.75.

A New Edition of "The Bee-Keepers' Guide; or Manual of the Apiary," by Prof. A. J. Cook, has just been issued by the publishers of the BEE JOURNAL. Sixteen thousand copies of this excellent and complete bee-work have already been sold, and it is to-day as standard as ever—Plain—Practical—Scientific. It contains over 450 pages, is beautifully printed, neatly and substantially bound in cloth, and is sent postpaid for \$1.25 per copy; or clubbed with the BEE JOURNAL for one year—both for \$1.65.

It will be noticed that the price hereafter will be \$1.25, instead of \$1.00 as heretofore.

LOCATION.—In selecting a site for an apiary, there are many considerations to be borne in mind, especially if bee-keeping is to be the sole business. The question of very greatest import is that of resources. Study the subject of the best honey-yielding plants and trees, and be sure that you locate within reach of some tolerably reliable source.—*Quinby*.

The Canadian Bee Journal improves with each succeeding number. It is printed on an excellent quality of paper, and its contents are equally good. Bro. Holtermann is bound to make a success of his venture, and Canadian bee-keepers ought to turn in and support him heartily. Of course, we would naturally advise every bee-keeper to *first* become a subscriber to the **AMERICAN BEE JOURNAL**; but to that "means of grace," we think Canadian apiarists should then add their own journal. The **CANADIAN** and the **AMERICAN** harmonize very nicely on the main objects to be attained unto in practical bee-culture.

Bro. E. F. Quigley, of the *Progressive Bee-Keeper*, has been promoted. Instead of being "associate editor," he is now one of the two "editors" of the continually progressing *Progressive*. Bro. R. B. Leahy, its publisher, is one of the *pushing* kind, and knows how to "get there" if anybody does.

Hear Ye the Judge.—On page 296 we suggested that Hon. Eugene Secor, the Apiarian Judge at the World's Fair, perhaps could set all to rights in the matter of the Ontario honey at the World's Fair, and thus possibly "avoid any unnecessary discussion." Here is what he has kindly written us in regard to the subject:

FOREST CITY, IOWA, March 12, 1894.
Editor "American Bee Journal."

In your issue of March 8th, you appeal to me to set matters right touching your controversy with Bro. McKnight. I don't know as I can do it. This seems to be a case of Canuck *vs.* Yankee. Each fellow has a chip on his shoulder. Both appear to be jealous of the reputation of their respective countries. I, too, am proud of my native land, and perhaps I shall not be able to divest myself of prejudice sufficiently to act as referee between you. And then, Bro. McKnight may object for the reason that I live south of the Dominion.

But it seems to me that for once we ought to be neither Canadians nor Yankees, but Cosmopolitans—at least those of us who live on this side of the imaginary line that separates us. For the Columbian Exposition was a World's Fair with a big W. The United States were the entertainers. Citizens of the world were our invited guests. We ought not now to get into any controversy with our visitors concerning the excellence or lack of excellence of their exhibits, or try to show that our own were superior. I apprehend that the American judges were magnanimous enough in the disposition of awards, not only to give

every foreign exhibitor his just dues, but to give them the benefit of the doubt, if such existed. Such was the Spirit of the Management toward those who, at great expense, tried to make our Fair a success.

Now, in reference to the disputed word "competition." According to Webster's International Dictionary, and the modifications which Bro. McKnight and yourself both seem to accept, it appears to me there is not any real difference between you.

I suppose it is understood by most people who had exhibits there, and by others who have had access to information as to the manner of judging, that in most things there was no "first prize," as at fairs generally. (An exception was allowed, I think, in the stock department, where prizes were awarded). Our instructions were that comparisons between exhibits for the purpose of recommending awards to the *best* was not the theory of the Commission, but that we were to report upon everything on its individual merits, and name the "particular points of excellence or advancement which in the opinion of the judge entitled it to an award."

Some standard of excellence in the mind of the judge was therefore necessary as a basis. Every exhibit competed with that standard. That being the case, it was very easy for one State to receive more awards than another, simply for the reason that it had a larger number of exhibitors, without the exhibits themselves being better individually.

If the quality were equal, the one having the greatest number of individual exhibitors would appear to carry off the palm, when in fact it would not be the case. For instance, suppose Ontario had 28 individual entries of extracted honey, and Michigan 5—if Ontario received 6 awards and Michigan 2, no one could say that therefore Canada honey is superior to Michigan. It *might* mean that Ontario had more money to spend on the exhibit of honey than Michigan, and that her Superintendent induced more individuals to contribute. Or, it might mean that the individual bee-keepers of Ontario took a little more interest in maintaining the honor of their Province than the Michiganders did of their State.

But I don't know that these comparisons are to the edification of any one, and now that the "war is over," let us bury the tomahawk and cultivate the arts of peace, and get ready for the next Columbian Exhibition.

America (including Canada) is a vast country, great in resources and in productions. No one Province or State can say, "we are the people and possess all the good things."

The fact is, that in the matter of honey there is such a vast territory that produces a superior article, that it is hard to say which locality is best. In my examinations I found it was confined to no one State or territory.

Ontario produces splendid honey, but her great secret of success is that she produces good *bee-keepers*—men who know how to pro-

duce and care for honey—maintaining its quality intact after it has left the hive, and how to exhibit it.

The prime need of this country is not better honey-resources, nor a better quality furnished by the Almighty, but bee-keepers who know how to garner, care for and prepare for market that which the Creator has already given us.

I could have shown you samples of extracted honey from Ontario, from New York, Ohio, Michigan, Iowa, Colorado, California and Nevada, that were worthy of especial honor, and it would be hard to say which was best of all—but I am sorry to say these were exceptions.

We have plenty of bee-keepers, but how few *Bee-Masters*. Quality is the great desideratum. Honey-producers are slow to recognize its importance. Canada bee-keepers are worthy of all praise for the interest they manifest in maintaining the quality of their product. EUGENE SECOR.

We felt certain Bro. Secor could give us something on the subject that would help all around, and we are glad he has done it so satisfactorily—at least to us.

Seeing there is no “real difference,” as Bro. Secor puts it, between Bro. McKnight and ourselves, we can say that we are ready to “bury the tomahawk” and help “cultivate the arts of peace” till “the next Columbian Exhibition” arrives. As Bro. McKnight will likely also agree with the Apiarian Judge, we are glad to be able to announce that, so far as this writer is concerned, the “war is over,” and no one so seriously injured, so far as we know, as to be compelled to remain even in the hospital.

☞ One way to get along with some folks in this world is not to know they are in it.—*Review*.

Bro. Root (A. I.) ought to have been a Methodist instead of a Congregationalist, because the former church has been noted for its “love feasts” and “experience meetings,” and we think Bro. Root would feel so perfectly at home there. We are led to the remark, from reading this in his “sermonette” in *Gleanings* for March 15th:

Sometimes I have thought I would stop telling my experience; but when I stop telling my trials that have brought me to study my Bible more, and to know my Savior more, then I stop getting letters of encouragement. By the way, these letters and words of encouragement are more helpful to me than you may imagine.

It may seem somewhat egotistical to keep

on telling one's own experience, but what usually is more interesting or helpful? We think that many of the sermons preached to-day would be a great deal more productive of good if they contained more of personal experience, and less of the “highfalutin,” unfeeling, cut-and-dried (very dry) spiritual fodder. What we need more of, is actual personal experience, whether in pulpit, prayer-meeting, or even in bee-literature. What is life, anyway, but one big “experience meeting?” And each of us contributes to the interest of the “meeting” our daily “experience.” Don't “let up” on telling your own experience, Bro. Root.

The Good Time Coming.—The poem below was sent to us by Mr. J. R. Bellamy, of Black Bank, Ont. It was originally written for the *Atlanta Constitution*, by Mr. Frank L. Stanton. As we believe in occasional variety, we here present the poem, which no doubt will be enjoyed by all:

WE WON'T WAIT FOR IT.

There's a good time that's a-comin', when
the weather will be clear;
When the bees will be a-hummin' an a-
hivin' all the year;
When the livin' light shall splinter all the
darkness with its beams,
An' Spring'll capture Winter with her
smiles an' with her dreams.

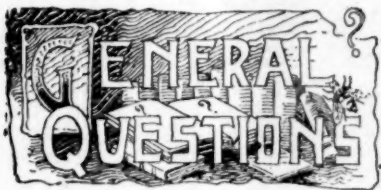
But we'd kinder like to state
That we ain't agoin' to wait;
Fer the good time that's a-comin'—it may
reach us mighty late!

There's a good time that's a-comin'—an' its
light around us creeps—
When a feller will be summin' o' his cash
in mountain heaps;
When we'll all be flush with money—an'
we'll spend it 'fore we're old;
When the stream'll flow in honey to a sea
whose shells are gold!

But we'd kinder like to state
That we ain't a-goin' to wait!
Fer the honey an' the money—they may
reach us mighty late!

There's a good time that's a-comin' when
the maiden or the mouse
Who bangs the old planner in the city
boardin' house,
Will picnic in the country, or go sailin' on
the deep,
An' give the world a holiday an' half a year
o' sleep!

But we'd kinder like to state
That we ain't a-goin' to wait;
Fer that picnic and that steamship—they
may reach us mighty late!



ANSWERED BY
DR. C. C. MILLER,
 MARENGO, ILL.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 20 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—Ed.

Give Them Bee-Bread and All.

As we had lately unusually warm weather, I examined my bees on the summer stands. I found one colony with the queen and bees all dead—killed, I suppose, by the severe and long spell of cold we had in December. Strange to say, there is plenty of sealed honey in each comb, within easy reach of the bees, and plenty of bee-bread also. Now with regard to this last (pollen), I wish to know whether it is good, or even necessary to scrape it off before giving the combs to another colony in April. H. D.

Montreal, Canada.

ANSWER.—Give the bees bee-bread and all. If it's in nice, clean shape it may be worth to them as much as an equal weight of honey. Even if not in the best shape, the bees are good at cleaning up.

Honey Crop of the United States.

If possible, please publish the honey crop in the United States for 1885, and each year up to this. In 1890 the BEE JOURNAL said "about one-fourth of a crop." What year was it a full crop? Is it better in Canada of late years (five years) than in the United States? What localities fail most?

Orangeville, O.

PETER MOYER.

ANSWER.—Friend M., did you ask such questions just on purpose to get me to say I don't know? I've no idea that any one can give an entirely reliable answer to a single one of them. The attempt was made one year by bee-keepers themselves to take a census of the crop, but it didn't amount to much. The federal government has also made some kind of a census at different times, and perhaps some of the States, but I think nothing of the kind has ever been accurate or complete.

Lately A. I. Root struck a plan whereby he thought he might make a pretty close guess at the amount of section honey produced. The plan was to have all the manu-

facturers of sections report the number of sections they had sold in this country. But all of the manufacturers would not agree to tell, so the plan fell through.

With regard to this whole subject, the ideas of some of our most intelligent men are quite vague. Ask a man what his average crop is, and he will give an answer that is quite wide of the mark if compared with the actual figures. My observation has been that most men set the figure a great deal too high, with no intention to be dishonest about it. Even with figures accurately kept, what do you mean by a "full crop" or an "average crop?" I'm sure I don't know. You may find the average crop one man has had for the past five years—that's easy—but his average crop for eight or for ten years will probably be an entirely different thing.

Several Questions Asked.

1. I have one colony of bees that lost its queen and nearly all the bees last winter. I gave them a queen in the spring, and this colony built right up and was in good condition for this winter, but they took another spell of dying about the first of December, and the queen went with them. They brought her out with the other bees that died, but they have stopped dying and appear to be all right now. What was wrong?

2. Would it do to give them some brood to rear a queen as soon as the bees begin gathering pollen? or what is best?

3. I have one colony of bees that about swarming time their young bees that have just hatched out crawl out of the hive and crawl off. They appear to be all right, but too young to fly.

4. Will feeding a colony of bees in early spring (as soon as they begin gathering pollen) and contracting the hive, have any effect toward making them swarm? I have one colony that I would like to have swarm as many times as possible. Please give me the best plan of making them swarm, outside of dividing for increase.

5. Why do our bees not swarm in this part of the country in May, but always in April and June?

6. Something more about the question asked on page 10. I am satisfied that it was a queen piping, but you say the piping is not heard before the issuing of the first swarm. That colony hadn't, nor didn't swarm, and no mistake about it.

7. Do you think the bee-business would pay in this country? About how many colonies could be kept in one bee-range?

Some of our honey-plants here are poplar, sourwood, fruit, blackberry, sumac, gum maple, willow, and lots of other varieties of blooms.

Bankston, Ala.

M. W. G.

ANSWERS.—1. I don't know. I might guess at several things, but merely knowing that bees died, nothing but guesses can be given.

2. It might do to give them brood from which to rear a queen, and it might be more

profitable in the long run to unite them with another colony, especially if you have a colony with a good queen but weak in bees.

3. It may be the work of worms. The worms build their webs over and among the brood, then it is torn out by the bees before the young bees come to full maturity, or else the young bees are so injured by the webs that they are thrown out as imperfect.

4. Yes, feeding may hasten swarming, and giving less room in the hive may also have the same effect. But contracting will also have a tendency to lessen the number of after-swarms. While a large amount of room has a tendency to retard swarming, and in many cases to prevent it, when a colony in a large hive does swarm, it is likely to cast a larger swarm, and it may do more in the way of after-swarms. As you are anxious to get as many swarms as possible from the same hive, you will do well to follow a plan lately given in this department. Get your colony as strong as possible by feeding, and by giving sealed brood from other hives, then when it swarms hive the swarm on the old stand, and set your pet colony in the place of some other good colony, setting this last in a new place. In a week or ten days your pet will swarm again, when you are to repeat the operation, each time it swarms setting it in place of some other good colony.

5. The matter of swarming is governed largely by the yield of nectar at different times and by the strength of colonies. In your region bees gather enough so that by April they are strong enough to swarm. Bees don't swarm straight along, but a colony that swarms in April must then build up, and is not strong enough to swarm in May. Possibly, also, there may be some let up in the harvest during May. But by June some may be strong enough to swarm again, much as they do in the North in buckwheat season. I must confess this is only theory, for I never was in the far South, and if I'm talking nonsense I hope some of the good friends in the South will tell us how it ought to be.

6. The answer given on page 10 is in accordance with the general habits of bees. But bees are great on variations. As a rule, only young queens pipe, and so piping is heard by them only before after-swarms. But in the previous paragraph you will notice I said, "Sometimes an old queen pipes, but not often." I have heard an old queen pipe when I think there was no intention of swarming. But it's a rare thing. It is also possible that in your case the old queen may have been changed, and the young queen was piping and killing off the other young queens. But the rule is that when piping is heard you may look out for a second swarm. In spite of your saying "no mistake" about their swarming, there might be a mistake unless some one had watched closely every hour for several days. A swarm may have come out, the old queen might have been lost and the swarm at once returned, then a young queen reared without any more swarming.

7. I don't know any reason why bee-keeping should not succeed with you. If you can have only an occasional colony yield more than \$30.00, as you report, you ought to do a profitable business. And if an occasional one can do that, it ought not to be a very hard thing to get all to average a fourth as well.

It's a hard thing to tell how many colonies can be most profitably kept in one apiary, even if you have been right on the ground all your life. At a guess, I should say you might keep 75 in one apiary, and it might run away beyond that.

Perhaps a Robber-Fly.

When I was down after cucumbers yesterday, something whizzed around and finally alighted on a buckwheat stalk. It had a body about an inch long, slim, with gauzy wings and a big head, and it had a bee in its mouth. What was it? SUBSCRIBER.

ANSWER.—It might be one of the robber-flies, possibly *Asilus Missouriensis*.

Getting a Surplus from Nuclei.

I have 18 colonies in good condition, some of them very strong, and have sealed brood now (March 10th). My hives are dovetailed, eight frames. Can I take 12 frames out and form six two-frame nuclei (returning empty frames), buying my queens, feeding them until well under way, giving them full sheets of foundation, and get surplus this season if the season is good, and not injure the old colonies from which the brood was taken? If so, how early in the season shall I order my queens? E. B. E.

Cooksville, Ill.

ANSWER.—It's asking a good deal to take a two-frame nucleus and get surplus from it, unless you commence early and have a long season. It's asking a good deal to take 12 frames of brood from a colony without hurting it. But it can be done, providing you don't take it all at once, but you are not likely to get much surplus from the old colony.

Whether you can do it all, and have as much surplus as if you had been moderate in your demands, depends somewhat on your pasturage, the length of your season, and especially on your fall pasturage. If you have had no experience in such things, you may not come out the following spring with as many bees as if you had only doubled. But furnishing queens and foundation, and feeding, will be a big help.

Honey as Food and Medicine is just the thing to help sell honey, as it shows the various ways in which honey may be used as a food and as a medicine. Try 100 copies of it, and see what good "salesmen" they are. See the third page of this number of the BEE JOURNAL for description and prices.



CONDUCTED BY

MRS. JENNIE ATCHLEY.

BEEVILLE, TEXAS.

Beats Anything in 25 Years.

MRS. ATCHLEY:—Did you ever? To-day at 2 p.m. the bees were bringing in pollen from skunk-cabbage, fully 15 days earlier than I ever knew before, while it is often April 20th before I see as much as to-day. On Feb. 24th it was 22° below zero, with the roads piled full of snow, and snow nearly 3 feet deep on the level, and now the snow is nearly all gone except a few banks. The temperature is from 55° to 65° above zero, and the bees are bringing in pollen. This beats anything in 25 years.

G. M. DOOLITTLE.

Borodino, N. Y., March 10.

Fighting and Gentle Bees.

I see by some private letters, and also by the bee-papers, that some have me down as favoring vicious bees altogether. Now the colony that I referred to as running the cattle off the prairie, was the worst one I ever owned, and was "a caution," but *always* came up with well-filled supers. But mind you, I do not mean that I want this kind of bees. I would select a medium, or a bee with about the temper of a cross between the common Italian and the German or black bees, if I were producing honey.

I have been experimenting for years to breed a race of bees that would combine the three essential points—prolificness, gentleness, and honey-gathering—and if you will give me such bees I will content myself.

As I believe one can talk and write best about that which he or she is engaged in, I feel it my duty to talk upon queens and queen-rearing, and I must tell you that I have not yet been successful in getting queens that produce bees almost as gentle as flies, that come up to my anticipations as honey-gatherers. The Carniolan bees are very

gentle, and seem prolific, but as yet I have not tested their honey-gathering qualities, but I will try to do so this season; and if I should find them superior, I will let you know, as I feel it my duty, in my position, to experiment for the benefit of the public, and I have been asked to do so and report.

Now, to come back to my subject, I will say that for business I like the Italians best so far, but I will take Cyprians or any other bees that will pay me best, regardless of temper, etc. I have mixed bees of all strains, to see if I could catch an improvement, and to-day I confess that I am not yet satisfied about the matter. The bees that represent the man sitting on a street-corner whittling a dry-goods box, are not the bees for me. I want bees that are *ever* ready to pounce upon an intruder, and defend their hives, and also bring honey when it is to be had. And if such bees are a little cross, so much the better for the honey-producer, as these traits, so far as my experience goes, mean well-filled supers.

JENNIE ATCHLEY.

Weather Fine in Ohio.

MRS. ATCHLEY:—The weather is fine this week. Bees are carrying great quantities of natural pollen. Some of them have their combs half full of brood. They are about a month ahead of last year.

J. K. WILSON.

Duncan's Falls, Ohio, March 9.

Rational Don'ts in Bee-Keeping.

Many persons enter the great field of apiculture on no knowledge except that obtained from some very flattering reports of successful ones. This to the novice in bee-keeping is but an *ignus fatuus*, and proves in very many cases disastrous. The "rational don'ts" about to be given are principally for the young in the race, but will sometimes fit older cases. A person to make a successful bee-keeper, that is, to make it a financial success, *must*, on the start, be provided with the in-born requisites, the greatest of these being love—*omnia vincet amor*; next patience, then courage, then industry, then money, then 44 other things; lastly, placed at the head, a knowledge of what to do, then bee-papers. Let the best bees—Italians, Albinoes and Carniolans—stand at the head. Make few mistakes, be honest and die happy.

Don't rush into the bee-business with-

out some knowledge of the facts in the case. If you must go, go slow. All that glitters is not gold.

Don't disturb bees more than is necessary, as the honey used to fill themselves is never returned to the cells. The more gentle the bees, the less the honey consumption when disturbed. Remember it.

Don't tolerate old-fogy-day hives. This is a progressive age. Our motto is, "Advancement to-day and forever."

Don't let too much drone-comb exist in your hives. Drones are large consumers, and bring nothing in, though a necessity to many, are a curse to both bees and keeper.

Don't fail to have your bees strong at the right time and cases ready. If you can never do that, the less money and time you waste the better for you and the bees. Study this point.

Don't be fooled in location. This is the master-wheel. Know the nectar resources, then pace accordingly, for no bee will ever be found that can collect nectar where it does not exist. Ponder over this point.

Don't practice a slack system of management in the apiary. It has never been known to pay, but has cost the keeper many moments of fearful suspense. Some times more.

Don't let the weeds grow so rank around the hives that the bees can scarcely find them, then cry out, "Bee-keeping is a delusion!" In that condition it would be. Mark that.

Don't have fourth-class bees when first-class are cheaper. The working qualities of bees differ very much. Much in bee-keeping depends upon the kind of bee used. Don't be fooled on this point. Italians are the standard.

Don't enter bee-keeping when every little sting makes you deathly sick. Your life is at stake. Try some other work. Be also quite sure that you have no disease of the heart. Bee-keeping has many trying ordeals.

Don't keep too large colonies for winter in mild climate. Have them strong when you need them; it's the cheapest in the long run. Study this point and save honey consumption.

Don't believe you know all about bee-keeping until you are certain last season's course might fail this year. A little knowledge of meteorology may help you out. Try it.

Don't fail to have plenty of water where the bees can get to it without loss of life. In breeding strongly bees need much water, both fresh and salt. Remember this, please.

CHAS. L. STRICKLAND.



Honey in the Brood-Chamber in Fall.

Query 916.—In an apiary worked for comb honey, when the season is over how much greater proportion of honey will be in the brood-chambers than if worked for extracted honey?—Colo.

I do not know.—EMERSON T. ABBOTT.

There should be no more.—A. B. MASON.

As I produce only comb honey, I must say I don't know.—C. H. DIBBEEN.

That depends. On general principles, it should be about the same.—WILL M. BARNUM.

That will depend upon how closely you extracted. So the question depends.—J. P. H. BROWN.

I should think generally more, but I don't know anything about the proportion.—C. C. MILLER.

There would be no difference if no extracting was done from the lower story.—MRS. L. HARRISON.

It depends upon how they were worked. I should say from the same quantity to twice as much, on an average.—R. L. TAYLOR.

All depends upon the way they have been managed. Look and see if they have enough; if not, give it to them, in some way.—E. FRANCE.

It would be hard to say what proportion, but there is no doubt that the bees put more honey in the brood-combs when comb honey is produced.—DADANT & SON.

No answer can be given. It might be more or less. Circumstances vary the amount of honey in the brood-chamber, other than the kind of honey produced.—A. J. COOK.

It will largely depend upon the way you work. If contraction is used in working for comb honey, there might be little or no honey in the brood-frames at the end of the season.—G. M. DOOLITTLE.

The amount would be variable, but all agree that considerably more honey remains when worked for comb honey, and therefore the bees winter better.—J. H. LARRABEE.

Let those answer who have tried both. In this I think a good deal would depend upon whether the one who extracted took any from the brood-chamber or not.—JAS. A. STONE.

That depends upon several things, the most important of which is the race of bees. As a guess, I should say that on an average there would be one-half more.—JAMES A. GREEN.

The proportion cannot be given, as it will depend entirely upon the management. One can have at the end of the season almost no honey in the brood combs, or he can have plenty.—M. MAHIN.

It all depends upon how much you extract from the brood-chamber. If you extract from the upper story only, then you will see no difference. At least that is the way I find it, and I produce nearly all comb honey.—H. D. CUTTING.

There will be little if any difference. With me, the greater proportion would be found in the hives worked for comb honey, and varies to some extent, so that on an average the difference will be hardly appreciable.—J. E. POND.

It will depend a little upon the plan you follow. If you extract before sealing, and often, you will probably get about all; but if allowed to remain on the hive until fall in both cases, I think there will be little difference.—EUGENE SECOR.

This depends entirely upon circumstances not mentioned in the query. The size of the brood-chamber, the depth of the frames, the late honey-flow, the method of extracting, and other factors govern the quantity of honey in the brood-nest.—P. H. ELWOOD.

Considerably more in those run for comb, provided the brood-nest contained ten Langstroth frames; if only eight frames were used in the brood-nest, it would depend greatly upon the amount of brood at the commencement of the harvest, duration of the flow, etc.—S. I. FREEBORN.

That would depend altogether upon the size of the brood-chamber used. With a brood-chamber of the size of the Nonpareil, used with a queen-excluder, there would be no difference. With a large brood-chamber there would be a greater proportion of honey—say one-

third more—left in the hives worked for comb honey than in those run for extracted; and unless extracting was done from the brood-chamber in both cases, there will be more honey left than should be. The time has come for bee-keepers to awake to the fact that with sugar at 4 to 5 cents a pound, it will not pay to have a large amount of our best honey stowed away for winter stores in a large brood-chamber, when our bees can be so readily stocked up with cheap food in the fall.—G. L. TINKER.

I have never kept watch of this thing, but I should think it would depend upon the bees and circumstances. Some bees will store more honey in the brood-nest than others. Taking it all in all, I shouldn't think there would be much difference, if the brood-chamber is not touched. If any, I would expect more honey below at the close of the season when run for comb honey.—MRS. JENNIE ATCHLEY.

That depends upon how you manage the bees in their hives. By the use of queen-excluders, I can make the results very nearly the same. But ordinarily, the hives run for comb honey will have a better supply of stores left in the brood-chambers at the close of the honey season. The manner in which some fast-going people have written on this subject of "honey in the brood-nest," has led many to believe that it is a waste of honey, to have the brood-nest supplied. I think differently.—G. W. DEMAREE.

Capons and Caponizing, by Edward Warren Sawyer, M. D., Fanny Field, and others. It shows in clear language and illustrations all about caponizing fowls; and thus how to make the most money in poultry-raising. Every poultry-keeper should have it. Price, postpaid, 30 cents; or clubbed with BEE JOURNAL one year, for \$1.10.

The Amateur Bee-Keeper, is the name of a neat little pamphlet designed for the class its name indicates—amateurs and beginners in bee-keeping. It is written by Mr. J. W. Rouse, of Missouri, a practical apiarist and helpful writer. It contains over 60 pages, and we will send it postpaid for 25 cents; or club it with the BEE JOURNAL for one year—both for only \$1.15.



Management at Swarming Time.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

A letter recently to hand, reads as follows:

"Is the plan of giving each colony a laying queen, immediately after swarming, a good one? Please answer through the AMERICAN BEE JOURNAL."

As I do not consider the plan a good one, I will try to give my reasons for so thinking, as requested.

Years ago we were told that no colony should go without a laying queen for a single day, if it were possible to give them one, and plans of introducing queens which required that the hive should be queenless a few days previous, have been severely criticised.

We have also been told many times, that the bee-keeper who wished to secure the best results from his bees should have a laying queen ready to give each colony as soon as they swarmed, as the time lost to them, by rearing a queen is equivalent to a swarm of bees. Being eager to know for myself all the plans which would give the best results, I have experimented largely, and the truth of the statement, that the time lost to the bees in rearing a queen in natural swarming was equivalent to a swarm of bees, is the first reason that the plan has not been a success with me. If it were bees that I was after, the case would be different.

With us, white clover yields enough honey to keep the bees breeding nicely, and prepares them so that they mainly swarm from June 20th to July 1st. Our honey harvest is principally from basswood, which blooms from July 10th to 16th. Now, all who are familiar with natural swarming know that the bees are comparatively few in numbers in the spring, and increase by the rapidly increasing brood produced by the queen, which, in due time, hatch into bees, until a swarm is the result. By giving a

laying queen to a colony immediately after it has cast a swarm, we bring about the same result (swarming) as before, or we place the bees in the same condition. The only difference is, that, having plenty of brood, they build up quicker, and are prepared to swarm in a shorter time. As this second swarming, brought about by giving a laying queen, comes right in our basswood honey harvest, it cuts off the surplus honey, for it is well known that bees, having the swarming fever do little or no work in the section boxes; and, if allowed to swarm, the object we have sought after (section honey) is beyond our reach.

Having given my experience on this point, let us see how the same colony would work had we not given the bees a laying queen.

Eight days after the swarm has issued, the first young queen will have emerged from her cell, as a rule, when the apiarist should remove all the other queen-cells from the hive, so that second swarming is entirely prevented. In ten days more our young queen is ready to lay, which is about the time basswood begins to yield honey largely.

During this period, between the time the swarm issued and the young queen commences to lay, the bees, not having any brood to nurse for the last half of the time, consume but little honey; hence, as fast as the young bees emerge from the cells, they are filled with honey, for bees not having a laying queen or unsealed brood seldom build comb in the sections. Thus, when the young queen is ready to lay she finds every available cell stored with honey. At this point the instinct of the bees teaches them that they must have brood or they will soon cease to exist as a colony, and a general rush is made for the sections. The honey from below is carried above, so as to give the queen room, and in a week we have as a result the sections filled with honey. I have had such colonies fill and complete section honey to the amount of 60 pounds in from 8 to 12 days, while those to which I had given a laying queen immediately after swarming did little else but swarm during the same time. Bear in mind we are talking about producing comb honey, not extracted.

Different locations may give different results; still, I think that nearly all sections give a large flow of honey at a certain period during the season, rather than a steady, continuous honey harvest the whole season.

My second reason is, that after bass-

wood we have a honey-dearth, hence the bees from the introduced queen are of no value; but, on the contrary, become consumers. On an average, it takes 21 days from the time the egg is laid to the perfect bee. Then if the colony is in a normal condition, this bee does not commence to labor in the field until 16 days old; hence, the eggs for our honey-gathering bees must be deposited in the cells 37 days before the honey harvest ends, or else they are of no value as honey-producers. As the basswood is all gone before the eggs of the introduced queen become honey-producing bees, and as the larger part of them die of old age before buckwheat and fall flowers yield honey, it will be seen that a great gain is made by letting each colony, having cast a swarm, rear their own queen; for thereby we save the expensive feeding of the larvae, which are in turn to become expensive consumers of the honey of the hive.

When we so work that we secure the bees out of season, we have to pay the same price for them, as regards the honey consumed in rearing them, that we would to secure these bees so that each one becomes a producer instead of a consumer.

If all who read this article will study their location, and then rear their bees in reference to that location, I think they will find that their bees will do as well as their more successful neighbors'. We often hear it said that one colony in the apiary did much better than the rest, and, had they all done as well, a rousing crop of honey would have been the result.

The reason that one colony did so well, was because it happened to have a large proportion of its bees of the right age to gather honey just in the honey harvest, and if we can succeed in having all the colonies in the apiary in the same condition as was this one, we can secure a like result from the whole beeyard.

Borodino, N. Y.

Controlling the Mating of Queens.

Written for the American Bee Journal

BY WALTER S. POWDER.

This very important but vexatious subject deserves more attention than it is getting, but I have no doubt that many are working on the subject who do not say a word about it. I happen to know of several who have it perfected

according to theory, but I know too well that practice will change their views.

It was a progressive amateur who recently explained to me how utterly useless the honey-extractor is; he could produce liquid honey and prevent swarming by a new, patentable method, entirely original with himself, and thus revolutionize the bee-industry! He took me to a secluded place, and whispered to me that all that was necessary was to take a comb of deep cells and shave them off close to the base; now fix a pan under the comb (the comb is to lie horizontally in the bottom of the hive), and as fast as the bees deposit the drops of nectar, they will fall in the pan. Theory and practice aren't a bit alike in the bee-world.

Now, I think I have done even more than our progressive friend, but I am not prepared to prove my work. I can cause a queen to take her wedding flight in the forenoon, or on a cloudy day, by feeding the nucleus in which she is, say a table-spoonful of syrup; at the same time I have caused drones to fly by the same method. For all that I can see, it is a success, but my yard has been all one race of bees.

Perhaps Mr. R. L. Taylor or Mr. Doolittle can throw more light on the subject. I have faith in the plan, and think I could produce purely-mated Italian queens in a yard of black bees.

Bees are in good condition, and the outlook is encouraging.

Indianapolis, Ind., Feb. 24.

Bee-Smokers, Bee-Escapes, Etc.

Results of Experiments at the Michigan Apiary.

BY R. L. TAYLOR, APIARIST.

Smokers for use in apiaries to aid in the control of the bees are rightly considered a prime necessity. They are made in great variety by a number of manufacturers. Several tests have been made by different persons, of the comparative powers of the "blasts" of some of the larger ones, but it occurred to me that perhaps that point is not the most important one to be considered for the reason that for all practical purposes the blast of any of the well-known smokers is strong enough—in fact, the use of a very strong blast is very seldom desirable.

I think the points that should have precedence in determining the value of a smoker are: the degree of freedom from choking up, and durability and

convenience in using; and these points can best be decided by practical use in the apiary. To compare in this way the two smokers that have perhaps the highest repute of any, viz.: the Crane and the Bingham, I procured one of each of the largest size, and put them to use in the apiary during the entire busy season.

So far as difficulty with soot was concerned, neither one seemed to have any decided advantage—either being entirely satisfactory when proper fuel is used. The fuel should be wood absolutely dry, and but little decayed; if fuel containing much dampness is used, soot will collect sufficiently to cause some annoyance.

As to durability, one season is not sufficient to enable one to form a judgment. Barring accidents, the leather used in making the bellows is, in an otherwise first-class smoker, the first part to fail, so that in such case the one in which the best leather is used, would generally prove to be the most durable. In the two smokers in question, the leather used appears so far to be equally good.

In point of convenience my assistant decided that the Bingham had a decided advantage, and in my judgment his decision was right. The wire handle for opening the fire-box in the Bingham was found more effectual in securing the hand from burning in the operation of refilling; for the cap of the Crane, though lined with asbestos, would often become much too hot to be grasped by the hand with impunity; but more important than this we considered the difference in the weight of the two smokers. From the use of asbestos in the Crane smoker, and the consequent doubling of the metal, it is made much the heavier, which made it a burden where much use was to be made of it, and caused the Bingham in such cases to receive the preference. Where one has the management of but few colonies, a smoker of one of the smaller sizes answers every requirement.

EXPERIMENTS WITH BEE-ESCAPES.

For the purpose of experiment, I procured and put to extensive use in clearing supers of bees, a dozen bee-escapes, a part of which were those known as the Porter, and the rest the Hastings. There is no question that they are of great utility for the purpose intended at any time when the bees are not busy gathering honey from the fields. As a rule, about 24 hours were required to substantially clear the supers of bees,

and then there were generally a few bees left in them, but not so many as to be a serious objection. They were not used until the honey season had about closed, and it is very likely that they had been employed during the time of active work in the fields, their function would have been much more rapidly performed.

Though no very great difference appeared, yet of the two the Porter seemed to operate the more satisfactorily. It appears that the perforated plates have the effect of making the bees contented where they are, rather than hastening their departure from the super. Great caution should be exercised by the novice in adjusting the escape in seeing that the super is bee-proof, otherwise he may discover later that he has instituted a disagreeable case of robbing.

BRACE AND BURR COMBS.

For several years past there has been much discussion of the question of the prevention of brace and burr combs, and for the purpose of such prevention frames with heavy top-bars have found much favor. During the past season, being possessed of 15 or more colonies upon such frames, I had a favorable opportunity for judging of their effectiveness. The top-bars of the frames I used are $1 \frac{1}{16}$ inches wide and $1 \frac{1}{16}$ inches deep. I spaced them about $\frac{1}{4}$ inch apart, so that they were about $1 \frac{5}{16}$ inches from center to center. The results were very satisfactory, and, unless seasons of more abundant honey-flow produce different results, leave nothing to be desired. There was scarcely a sign of a burr-comb except where a frame was improperly spaced.

CLEANSING WAX WITH ACIDS.

Having seen the use of sulphuric acid recommended for the cleansing of wax, I procured some in order to test its efficacy. To do so, I brought the wax to a hard boil, then dipped it into a wooden vessel and added about a table-spoonful of the acid to 12 pounds of wax. The wax which before was very dark, was astonishingly improved in appearance. However, the process is one not to be recommended unless in extreme cases.

The bringing of the wax itself to the required temperature demands extreme care to avoid danger, and the acid is a poison which must be handled with the greatest caution; and more than all this, the wax is undoubtedly, as Dadant points out, injured for the use of the manufacturer of foundation, and the

price would be consequently lessened rather than increased, if it is to be used for making foundation.

It seems wiser, therefore, to render wax in the ordinary way, and to make use of the acid process when the wax is very dark, and is to be used for some other definite purpose than that of making foundation.

Lapeer, Mich.

An Experience with Southern Queens.

Written for the American Bee Journal
BY W. H. NORTON.

I see in the BEE JOURNAL of Feb. 22d the editor asks for experience in regard to Southern queens being hardy, etc.; and as I am pretty well located North, I thought that I would relate my experience.

First, I will give a little idea of what our winters are here. For the past three days it has been from zero to 35° below. It has been 35° below several times before this winter—in fact zero the most of the time. We have about four feet of snow on a level; it came on early, before the ground froze up.

Well, yes, I have tried the Southern five-banded queens. Two years ago the coming spring I sent South and procured half a dozen queens, introduced them successfully, and they built up rapidly in warm weather, but when it came cold in the fall they dwindled badly—reduced to very small colonies. One got so low that I gave them two frames of Punic brood.

I put them into the cellar at the usual time, with the other bees, and the latter part of January I looked at them; I found them very quiet—five colonies out of the six were dead, with plenty of honey, etc.

When spring came, and I put out my bees, the one colony was still alive, that is, the queen, and the Punic bees I gave them in the fall—the yellow ones were all gone—the only yellow bee was the one queen.

Now I do not claim that they cannot rear hardy queens in the South as well as in the North, but I do not think that they have the interest as a general thing; they go for beauty regardless of hardiness.

Well, with my lone Southern beautiful queen, I was anxious to experiment, so last season I reared my drones from a colony of very black bees, that I had in my yard, which had proven to be very

hardy, always wintering and coming out strong in the spring. My queen I reared from that five-banded Southern queen. The color of the workers produced from this cross was more than up to my expectations—they are all as even three-banded bees as any Italians I ever saw—no black visible. At first I was sure that the queens could not have been mated with the blacks, but out of 25 or more queens they all came out alike. Otherwise than color they have the appearance and handle similar to the blacks, and at this date (Feb. 26th) they are wintering in nice condition, every colony apparently as strong as in the fall, and no dead bees on the bottom-boards, nor on the bottom of the cellar. The most of the yellow ones, the winter before, came out and died on the bottom of the cellar.

This is my experience here, away down East in Maine.
Skowhegan, Me.

The Result of a Florida Bee-Hunt.

Written for the American Bee Journal
BY C. F. GREENING.

As per my promise of Feb. 6th, I will now give the result of my Florida bee-hunt.

On Feb. 7th we started for the swamp, three miles west, equipped with two glass-covered bee-boxes, broken comb honey for bait, and a little flour to mark bees.

Arriving at a peach orchard in full bloom, we found bees, and they soon found the honey. In half an hour we had two well-developed lines. Now with our removable bottomed bee-boxes, we soon had a dozen hungry bees caught, by placing the box over the honey, the bees flew to the glass top, and were caged. Away we start on the strongest line, following for one-half mile to a small clearing, put a piece of comb honey in the box, when the captives at once began loading up.

Setting all on a stump, the box was removed, and soon we had our line again developed, and a dozen more hungry bees caged. Following the line nearly one-half mile farther, through the great piney woods to the edge of an impassable swamp of perhaps three-fourths of a mile—here was a dilemma; but an earnest bee-keeper seldom fails. Again the hungry bees are fed, turned loose, and before letting go a little flour is sprinkled on the backs of several. We

soon found that the bees circled round and round, clear above the tall trees, and darted high in the air, on the line, showing that their home was still far distant, and probably beyond the swamp, as it took 12, 13, and 15 minutes for them to return.

Now taking our bearings as nearly as possible across the swamp, we returned to our team, drove four miles around, and tried to intersect the line opposite to where we left off. An hour, and we are there with a hungry lot of caged bees, which being fed and released, again lined away for home. We had struck the line within a few rods, and shortly had a hundred bees buzzing around, but it being near sundown, we could not distinctly make out a line, but being sure of their close proximity, we returned home.

Early the next morning we were on hand, and so were the bees. More honey was fed, more flour sprinkled, yet we could not get them to line out. They would dart out among the tall pines, almost without circling. We hunted, and climbed fallen trees for an hour, and at last got a general direction staked out. Then taking a dozen bees about 20 rods, to a small clearing, they were again fed and released, and a good line taken, right through the pines.

Now taking the two starting-points, 20 rods apart, like the bottom of a capital letter A, the two lines must intersect. A little figuring, and I made it at a point about 30 rods distant, then told my assistant to watch me and see that I started right, and to line me with the stakes. Away I went, then stuck more stakes, and on again. The 80 rods were paced off, and trees examined closely; bees all around could be heard, yet not discovered. They must be near. The bait was laid on a log I stood on, that had lately burned down, and soon a dozen bees were on it, and flew straight to the broken top of the tree I was standing on, not 30 feet away, and in a shattered section of the trunk there the colony lay.

Giving a hurrah, my assistant soon came, was sent for a hive, and I began work. A smudge was made of green palmetto leaves and moss, then commenced the work of tearing the tree to pieces with saw and ax.

The whole colony was soon laid bare, driven on one section of the log, several sheets of brood-comb carefully taken out, cut to size, clamped into frames, and placed in the hive, the honey gathered into a pail, and then the section of log carefully laid in front of the hive.

Filling my pipe, I sat down to watch the result. A few stragglers soon found the combs, set up the home call, and it would have made a wheelbarrow laugh to see that mass of bees spread out on the ground and run for that hive, rolling and tumbling over each other to get there. Half an hour later not a bee was to be seen—all were in the new home.

Now setting fire to the tree to clean up all the balts and refuse, I picked up the hive, carried it to the buggy, and on my knees home. By noon they were set on their permanent stand, and at 1 p.m. they were working in their new home, cleaning house, and carrying in pollen, as though they had always been there.

The colored people are utterly amazed at "De way dat ar Yankee ken handle dem bees, do beat eberyting I ere saw!"

To-day (Feb. 20th) the hive is full of bees and honey, and working nicely. Orange, plum, peach, jasmine and other flowers are in full bloom, and bees reveling in sweets here, while in my far-away Minnesota home my yellow pets are housed in the cellar, and must remain for 60 days yet. Oh, that I had them here for a month!

Next week I will try to run the other line, and save more hidden sweets from the depths of a Florida cypress swamp.

Orange Park, Fla.

Absolute Prevention of After-Swarms.

Written for the American Bee Journal

BY W. HARMER.

As inquiries are coming in for fuller particulars of the plan I adopt for the absolute prevention of second or after-swarms (see page 305) I would say that I brush every bee off the combs of brood into the hive on the old stand, to swell the number in, or of, the prime swarm (which makes a rousing colony for the honey-flow). I cage the queen as soon as I find her, and place the cage on the alighting-board so that the bees return very soon after issuing.

The bees are hived on empty combs or full sheets of foundation in wired frames. As the queen is caged and safe, I sometimes leave this work until the next day, if I am too busy at the time. I admit that this is a little more trouble at the time than hiving the bees on a new stand, leaving brood and bees on the old, as I used to do; but when it's done, it's done—no more anxiety. You will know that it is impossible for an after-swarm to issue from that hive. I drive or start

a small wire nail in the cleat of this hive in front, which shows at a glance what hives have swarmed, when I leave the disposal of the brood until the next day. I sometimes liberate the queen on the alighting-board, and let her into the hive in the evening.

Manistee, Mich.

Eight or Ten-Frame Hives?—Queries.

Written for the American Bee Journal

BY JOHN M. SEILER.

On page 623 of the BEE JOURNAL for November 16th, 1893, in the report of the North American Convention, and in answer to the question, "How many preferred a 10-frame hive?" 16 favored it, and 42 preferred an 8-frame hive. One had changed from an 8-frame to a 10-frame, and 24 had changed from 10-frame to the 8-frame hive, showing that the majority were for 8 frames.

I have never used a 10-frame hive, so I cannot tell from experience which is the better, but will tell what my bees did in 8-frame hives during 1893.

I put 14 colonies into the cellar on Nov. 12, 1892, and took them all out alive on May 1, 1893, but 3 died soon after, leaving 11. I allowed the 7 strongest to swarm, from which we got 15 swarms. The next two in strength, I got 50 pounds of honey each in sections, and I united the second swarms with the two weakest.

The first prime swarm was on June 7, hived on empty frames, and by fall they had filled 4 supers of 24 1-pound sections each, or 90 pounds net, and had enough to winter on.

We had no clover honey here during 1893—lots of blossoms, but I did not see a bee working on white clover last year. We had about half a crop of basswood. The caterpillars ate all the foliage of the basswood in 1891 and 1892, and about one-half in 1893.

I have watched the writings of the prominent bee-keepers during 1893, and it seems the Southern bee-keepers, or at least the majority of them, prefer a 10-frame hive, and a majority in the North prefer an 8-frame hive. I think an 8-frame hive plenty large enough for our short seasons here in the North.

THE ANSWERS TO QUERIES.

The answers to Queries are the same as other things—so many conflicting theories. Take the replies to Query 908, on page 142. Seven say, "Leave

the old queen in the old hive;" 10 reply, "move her to the new hive;" 9 don't mention the hive at all, but to "move the old queen to the new location," or, "it doesn't make any difference." It seems there are about one-third for each of the three ways. The reply of Dr. Tinker is right to the point, viz: "1. Leave the old queen with the old hive on a new stand. 2. I would not 'commence to divide' at all. I don't believe in it."

Five of the 26 would not divide.

Query 910 asks, "Do you clip your queens' wings?" Eleven answer "No," 13 reply "Yes," and one never practiced it. After "Illinois" has read these replies, how much wiser will he be?

Of course, some queries have the replies nearly all on one side, such as Queries 883, concerning starters, 884 and 901. In the replies to Query 898, 9 prefer a 10-frame hive, 9 an 8-frame, and 5 all the way from 8 to 32 frames.

But, take it all in all, the "Old Reliable" is a good paper. Long may it prosper.

Bees are wintering nicely here so far. Chanhausen, Minn., Feb. 21.

Bees Fertilizing Pumpkins, Squashes, Etc.

Written for the American Bee Journal

BY F. A. WILLSON.

I recently received the following request:

MR. F. A. WILLSON:

Dear Sir—Referring to your letter in the BEE JOURNAL, page 282, will you kindly say in that journal what difference, if any, you think has been made in the fertilization of pumpkins, squashes, etc., by the introduction of honey-bees? Yours truly,

C. C. MILLER.

Marengo, Ill.

In answer to the foregoing I will state that in the spring of 1892 we planted a few hills of the Hubbard squash; some five or six plants came up and grew most luxuriantly, the ground being a rich, black loam. The vines spread in all directions and covered quite a space of ground.

About the last of July the young squashes began to set and would grow to the size of a medium-sized apple, then turn yellow and die. I saw them daily, and watched for bees, as we had been told that squash vines would not bear unless there were bees of some kind to fertilize them, by carrying the pollen from flower to flower. I did not find a

bee of any kind about them until quite late in August. At that time bumble-bees were on the blossoms, and nearly all the sets after that grew finely, but were a little too late to ripen, although mature enough to cook well.

In the spring of 1893 we planted the same kind of squash in the same place, and had about a dozen plants from which the vines spread in all directions. As soon as they blossomed the bees found them, and the result was that nearly every set produced a fine, large squash, all of which matured before the frost killed the vines. There were no honey-bees in this part of the country in the year 1892. Bumble-bees are not so plenty here as further south.

With pumpkins, we have not had a fair test yet, nor with any kind of squash except the Hubbard.

It is a well-known fact that vegetables will hybridize from the pollen of one falling upon the fruit blossom of another of the same family of plants. For instance, if squashes and pumpkins are planted in the same garden, although they may be several rods apart, they will hybridize ("mix," as we used to say). Now the query is, How does the pollen get from one plant to the other? Is it carried by the wind or by insects? It seems to me that the bees get in their work in nearly all such cases.

Bathgate, N. Dak.

When the Bees See, Etc.

Translated for the American Bee Journal

BY REV. S. ROESE.

Der Bienenvater for January, Vol. X, No. 1, has the following interesting item, asking the question, "Under what circumstances does the bee see?" By clear sunshine the bee sees well, but the reverse at twilight, and in the dark hive she does not see at all, and in all her work inside she is wholly guided by feeling. Neither does the bee see well in dark and cloudy weather, for on such days bees do, by mistake, enter neighboring hives.

We hear it often said that bees can see in the dark, although there are such animals, as the cat and owl, and others, whose eyes are so constructed that they can see at night, but not so with the honey-bee. Take, for instance, a bee in the evening at twilight; throw her up in the air a few steps from the hive. She will rise up feebly, and stray about in a small circle, and drop down and not find

her hive again. A too bright light will blind the bees, which is proved when on a warm, sunshiny day in the winter bees come out of their hives, they fall down to the ground and die in great masses.

STORKS AND BEES FIGHTING.

The Deutsche Imker for January, Vol. VII., No. 1, contains the following interesting narrative of a desperate fight between storks and bees:

An apiary was located in a yard where the bees had to take their course over the roof of a large barn. On the top of the roof a pair of storks had their nest with three of their young brood to care for. The hum of the coming and going of the bees seemed to be very offensive to father and mother stork, for they attempted to hinder them in their flight and catch them, which the bees considered as a declaration of war. The bees advanced to the storks' nest in such masses, attacking the young brood, that the aged couple were unable to protect them. Moment after moment reinforcements of bees arrived, and the engagement became hotter and hotter. The storks also brought up reinforcements until 13 in number appeared on the scene of action, and all fought unitedly on the barn-roof battle-field against an overwhelming and powerful foe. But in vain, for the bees gained the day, and the three young storks remained dead on the battle-field.

Malden Rock, Wis.

Retrospective and Predictive.

Written for the American Bee Journal

BY JOHN F. GATES.

Last year was a good one for beekeepers in many respects, although the honey crop has not been very large in some places, yet, as a general thing, success has crowned the efforts of those who have managed wisely, and have been in earnest.

The bee-papers have given us much needed instruction, and they seem to be healthy and in good spirits, with an inclination to progressive rivalry. Close competition has brought the survival of the fittest to the front, and reminds us that periodicals, like men, must possess "push" or get left on life's ocean. We like to see bee-papers first-class, yet haste in this direction often dwarfs and kills the very object to be attained, and papers may, if not careful, attain unto

dyspepsia with its train of ills by living too fast. Some periodicals have tried this, and to-day they are suffering from a severe fit of sickness, while the old AMERICAN BEE JOURNAL still looms up like the giant oak, with its slow but steady and healthy growth, towering up unto the skies, the admiration of all eyes.

Ideas, too, like other things, can get ripe too quick, and the past year seems notable for a superabundance of wind-falls of this character; however, no permanent hurt seems to be done to our industry, owing, perhaps, to the remedies applied. Those who have been afflicted with that class of ideas seem at last to have realized that in this republic of ours there is always a reserve force that will make itself felt, if occasion requires; and as a law-abiding people, we believe not in dark and unlawful ways of doing things. Yet, no doubt there is, and always will be, an appetite for startling things, yet they are unhealthy, and to be avoided as much as possible.

The past year has brought us many blessings, and many changes have also taken place. We regret that Prof. Cook, that old veteran and helper, has gone west, and while it seemed we could not spare Bro. Newman from the old AMERICAN BEE JOURNAL, yet his mantle has fallen on young and worthy shoulders.

The World's Fair has scattered seeds of knowledge which will bear fruit for coming generations. Bee-keepers may well be satisfied with the display of their products, and now as the year 1894 has long since dawned upon us, let us all remember each other, and help along in that spirit of love and charity which worketh no ill to our neighbor. May this year develop at least a part of the vast field of usefulness which lies before us. This field of thought and action can not be developed at one stride, or by any one person; no particular twist of the wrist can accomplish it.

The advent of a new era in bee-keeping, which seems almost sure to come in the near future, will not be startling. It will likely be brought about by the natural reaction which generally follows any extreme position or action advocated or practiced in any vocation. It seems that bee-keepers have suffered much from extremists and selfish persons, and those who seemed to play with the vocation as with a toy, forgetful or careless of the harm they might do. The reaction perhaps will come from conservative bee-keepers who are not willing to see their vocation destroyed; but man is so

hopeful that something startling is the thing that may possibly bring the much-coveted prize of success, that it is queer to see the lengths to which he may be led before he sees his true condition; but he is almost sure to see it sooner or later, and then woe to the quacks and demagogues who have thus bewitched him! But the measure must be full before he sees it. I know not how soon the reaction will come—I don't pose that high—but the past year has been productive of much that would indicate that a dispensation of common-sense can't come too quick, even if it hurries.

Ovid, Pa.



The Wisconsin State Convention.

Written for the American Bee Journal
BY DR. J. W. VANCE.

The Wisconsin Bee-Keeper's Association met at the Capitol in Madison, on Feb. 7 and 8, 1894. The President, C. A. Hatch, of Ithaca, being absent on account of sickness, the 1st Vice-President, Franklin Wilcox, of Mauston, took the chair. The attendance was not large, but the discussions were as interesting and spirited as usual.

The leading topic was swarming, its causes, desirability, and proper management. It was an interesting theme to most of the members present, particularly to those who have not had a large experience in bee-keeping. Of course there was quite a diversity of views and experiences even among those who have been long in the business.

THE CAUSES OF SWARMING.

The chief causes are over-crowding and heat. The queen, having occupied all available cell room not filled with honey, is out of a job, and at once the workers start queen-cells and prepare for swarming. When the swarming impulse takes possession of a colony, the bee-master usually can do little to restrain them from swarming. Under

these circumstances his best course to pursue is to provide more cell-room by giving them empty combs. If queen-cells have been started, cut them out. It is generally found successful to place a super on the hive, filled with sections, and a frame of brood taken from the brood-chamber, and its place supplied by an empty comb or sheet of foundation. The bees will go immediately into the sections, and, finding plenty of work, will generally get over the swarming-fever.

If the impulse to swarm is caused by extreme heat, as it frequently does where the hive is exposed to the direct rays of the sun, shading the hive will often control the swarming-fever.

IS SWARMING DESIRABLE ?

This is a question not yet solved. The convention was considerably divided upon it, but it was concluded that where increase of colonies is desired, it is well to allow them to swarm to a limited extent, but if honey be the principal object, swarming should be limited as far as possible.

MANAGEMENT DURING SWARMING.

This is an important point, and one of especial interest to those who as yet have not had much experience in the management of bees. The consensus of the members upon this point is about as follows:

The bee-keeper should have suitable appliances—hives (movable-comb hives, of course), the frames filled with foundation if he has no empty combs. When the swarm issues and has clustered, the old hive should be placed on a new stand, and a new hive on the old stand, filled with combs or foundation. Then catch the swarm in a suitable swarm-catcher, and empty them upon a cloth in front of the new hive on the old stand. They will rush in and set to work with new energy, and not know they are doing business at the old stand. The old hive with its brood and honey will soon have a young queen, and in a short time be as populous as ever. It should be watched, and queen-cells removed, lest it cast a second swarm.

THE HONEY-BEE IN NATURE. *

An essay was read upon "The honey-bee in the economy of Nature," showing the adaptation of the bee to the needs of plant life; that instead of the farmer and horticulturist antagonizing bee-keeping, they should welcome it as one of the most important and helpful agen-

cies in promoting their own industries. The same writer touched upon the chemistry of honey and sugar, showing from Prof. Cook's treatise that nectar, which, according to that writer, is largely cane-sugar, when brought rapidly and in large quantities to the cells, does not remain long enough in the stomach of the bee to be properly digested, and therefore, for the same reason, syrup fed to bees is deposited by them unchanged in the combs. For this reason it is impossible for bees to make genuine honey from cane syrup. [This essay by Dr. Vance, will appear soon in these columns.—Ed.]

ADULTERATION OF HONEY.

Bee-keepers have been made to feel the great injury done to their industry by adulterations. The World's Fair city is a prolific source of those condemnable mixtures of honey and glucose, and retail stores throughout the Northwest are supplied with them in competition with the genuine products of the apiaries, greatly reducing the price and obstructing the market for the pure and unadulterated article.

THE USE OF SEPARATORS.

Mr. Wilcox, who served as manager of our honey exhibit at the World's Fair last year, was very decidedly in favor of separators. He said it was the next thing to impossible to get straight combs without them. His experience in obtaining honey suitable for the exhibit last summer had convinced him of the fact.

Mr. Gross said his experience did not coincide with that of Mr. Wilcox's. The others present seemed to agree with Mr. Wilcox.

WORLD'S FAIR EXPERIENCE.

Mr. Wilcox gave a very interesting report of his work in preparing the exhibit, and related his experience with the workmen who were engaged in building show-cases, and other work in arranging the buildings, etc., and the persistent effort on the part of the mechanics to kill time and prolong their job—more than doubling the time necessary for getting things ready for the opening of the great Exposition.

A WINTERING HIVE.

Mr. Towle gave a description of a double-walled (chaff) hive with a modified Langstroth frame 14x10 inches. The entrance is situated underneath the hive the full width of the brood-chamber, and so arranged that all dead bees fall out and leave the entrance wholly

unobstructed. He says that it has proven to be a very successful wintering hive. At the present his bees are in good condition, and the prospect is they will go through the winter nicely. It is a great satisfaction to hear of a successful wintering hive, for the great drawback to our success in bee-keeping is our loss in wintering.

PREVENTING BEE-DIARRHEA.

Mr. Hewett's device for preventing diarrhea during winter, which is so disastrous to bees when in winter quarters, was shown by means of a model constructed out of a pasteboard box. A frame 2 or 3 inches deep, the size of the hive, rests upon a loose bottom-board, and the hive is placed upon the frame. Across the middle of the frame a board is nailed, about one-third the size of the frame; underneath this board the entrance is made. The object of the cross-board in the middle of the frame supporting the hive, is to shield the bees from possible drafts of air. The frame supports the hive 2 or 3 inches above the bottom-boards, thus affording ample space for dead bees, and preventing obstruction of the entrance. The hive is covered tightly, and the bees have abundant ventilation from below.

Mr. H.'s success during the past 10 years is sufficient proof of the success of this device in preventing disease among his bees. He winters his bees in the cellar.

HOW TO MANAGE SWARMS.

Mr. H. Lathrop gave his method of managing swarms, which is, I think, worthy of note, as it is, in his experience, quite successful. He clips the wings of all his queens early in the season, and knows, if he finds a queen unclipped, that she was hatched last year. When a swarm issues, he catches the queen and places her in a new hive filled with empty combs on the old stand, and puts the old hive on a new stand beside the old stand, with the entrance turned at right angles from the new hive. Of course the bees not finding their queen with them, return to the new hive on the old stand, and finding the queen and plenty of room, go to work.

Each day he moves the old hive a few inches around until in a few days the entrances are side by side; then he moves the old hive to a new stand. By this management he strengthens the new colony, as many of the bees in the old hive go into the new hive with the old queen.

Although there were not as many bee-

keepers present at this meeting as usual, many of the members were men of long experience in bee-keeping, which gave weight to their opinions upon the various points discussed.

The officers for the present year are as follows:

President—Franklin Wilcox, of Mauston.

1st Vice-President—Jacob Huffman, of Monroe.

2d Vice-President—John Towle, of Brooklyn.

Recording Secretary—H. Lathrop, of Browntown.

Corresponding Secretary and Treasurer—J. W. Vance, Madison.

J. W. VANCE, *Cor. Sec.*



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Bees Doing Finely.

The bees are doing finely at present. Mine have a "snap." They went out on Sunday and found 2 caps and 3 old box-hives that had been taken up last fall, and left exposed in an old wood-house with the windows broken, and you may be sure they have been busy these two days "bringing in the sheaves." They are also loaded with pollen, but I do not know where they get it, as no bloom has opened yet.

J. E. PRICHARD.

Port Norris, N. J., March 5.

Why Keep Down Swarming?

I have 12 colonies of bees in Langstroth hives—3 Italians, 3 blacks, and 7 hybrids. From the black bees I got no honey. Will some one tell me why it is that all, or most bee-men, try to keep down swarming to get honey? The money is what all are working for. I had one colony to swarm three times—one first and two after, and I got from that colony and increase 96 pounds of comb honey, and could have sold the honey at 12 cents per pound, which would have been \$11.52; and I was offered \$12.00 for the 3 colonies; total, \$23.52. My next best colony of Italians just gave 32 pounds of honey, and no swarm.

Bankston, Ala.

M. W. GARDNER.

Working Lively—Severe Hail-Storm.

I gave the bees an overhauling yesterday, put surplus cases on those that needed them, and they are working lively to-day. As I write they fly by my window as thick and fast as shot.

We had one of the hardest hail-storms here last Sunday, about 4 p.m., that I ever witnessed. Ice was seen the next morning; yet, strange to say, the gardens were hurt but very little beyond a little knocking about.

ALBERT VOUGHT.

Illawara, La., March 17.

Small Loss in Cellar Wintering.

Bees wintered in the cellar have come out with a small loss, and in splendid condition. I lost, by becoming queenless, 5 colonies out of 111.

O. B. BARROWS.

Marshalltown, Iowa, March 21.

Carrying in Pollen.

Bees are carrying in pollen very well at present. They began on March 7th. A good many bees starved to death this winter. I have wintered all of mine so far.

THEO. F. CRAIG.

Otwell, Ind., March 18.

Bees Have Wintered Well.

Bees have wintered well around here, and are in good condition. Mine have considerable brood now, and bees worked well on soft maple yesterday, which is something new—so early for Minnesota. I hope that we will have a good spring and honey crop.

N. J. THILL.

Lake City, Minn., March 19.

How About Montgomery Co., Ark.?

I am preparing to go into the honey-producing business, and am thinking of going to Montgomery county, Ark. Can any one tell me about this part of Arkansas as a bee-country? or had I best remain where I am—in Central West Virginia? It seems to me that we have too much rain in West Virginia in May and June, for success in bee-culture. Some one please answer through the BEE JOURNAL.

J. S.

Long, W. Va.

California Flowers and Climate.

In Kings, Tulare and Kern counties are an abundance of cheap and splendid alfalfa fields for bees to pasture on. Government lands are scarce, not any in the valleys, but lots of land high in the mountains, at present under snow (Feb. 18th), and most of it will be until the first of June; but here in the San Joaquin valley, not more than ten miles from the snow, everything has a different appearance; on the plains are wild flowers, along the canals are willows in bloom, in the orchards almonds in bloom;

oranges hanging among the green leaves look very nice in the dooryard; the roses are in bloom, and lots of other plants. The bees are all yellow now-a-days, caused by the pollen off the willow bloom.

Land can be bought here in Tulare county, all the way from \$80 up to \$150 per acre, water-right with the land. The price depends upon the amount of improvements, and location of land to a town.

As to climate, that all depends upon the person. We can fill your orders if you will let us know what it is.

I believe, come to think about it, there is one order that we could not fill, and that would be an order for blizzards. I have not heard of any in the State.

Traver, Calif.

FRED M. HART.

Prospect for a Bountiful Crop.

Bees are gathering honey very fast now from fruit-bloom. The past winter has been very severe on bees, but I lost only one colony out of 16. The prospect now is for a bountiful honey crop, but cold, wet weather may stop the honey-flow, as it has done for the last three years. Can some one let me have No. 17 of the BEE JOURNAL, Vol. XXVII? I lost that number, and want it, as with that exception I have a complete file. I will return something of equal value to any one sending me that number.

W. R. TATE.

Bowling Green, Miss., March 12.

Moving to New Country.

In regard to southern or southwestern Texas being a desirable place to move to, I will speak from experience and say, let no one move a family there, without first going and looking around, and, by all means, being his own judge, as he should be, in all new countries. By all means, no one should go to malarial localities, regardless of what others may say.

Nokomis, Ills.

E. SANDFORD.

[Mr. S. is quite right about personally investigating before moving "bag and baggage" into any new part of the country. See for yourself first, and then you'll know whom to blame if all doesn't prove as expected.—Ed.]

Wintering Well—Nice Weather.

My bees are wintering well so far. They are packed on the summer stands with oats-chaff. I walked through the yard a few days ago, and was surprised to see how they were carrying in pollen, and I thought some honey.

Just one year ago the 6th of March I had both of my legs broken, just above the ankle joints, and was laid up nearly all last summer, but by good care I got along finely, and can walk pretty well again. Last fall, with some help, I got the little workers packed snugly on the summer

stands, and now it makes my heart glad to walk out through the yard and hear the hum of the little bees again, as I did not have any pleasure with them last season.

I got an average of 15 pounds, spring count; I have 26 colonies, and have not lost any so far this winter. We are having very nice, warm weather now. By the way vegetation is shooting out, we will have an early spring.

FRANCIS R. MANNING.

Reynolds, Ills., March 19.

Good Results in Wintering.

I winter my bees on the summer stands, with very good results. This winter I had them packed in forest leaves, and never had bees winter any better. Plenty of honey, plenty of bees, and but little loss or shrinkage in bees during winter.

They commenced gathering pollen on March 8th, and have gathered every day since then, in abundance. White clover looks well, and the spring is at least one month earlier than usual.

LEE POWELSON.

Batavia, Iowa, March 17.

Wintered Better Last Year.

I have just looked over my bees. I have only 22 colonies, and all are alive, but they did not winter as well as they did last year, on account of the poor season. They were light in stores; I estimated that they had from 10 to 35 pounds of partly sealed or capped honey, mostly dark buckwheat; besides, they had stored a good deal of fine pollen mostly from rag-weed, and some dark stuff that resembled pitch—I think it came from sunflowers. That, I think, did the harm. My lightest colony has plenty of honey to last them until the middle of April, then I will have to resort to sugar—"open kettle," if I can get it here. This is no bee-country, but a No. 1 farming country.

J. C. NIEMOLLER.

Tarnov, Nebr., March 10.

Lost Only Two Colonies.

Bees are doing well, and have been gathering pollen for the last week. I lost 2 colonies out of 59, by the queens dying.

MRS. A. A. SIMPSON.

Swarts, Pa., March 16.

California Rainfall and Honey Crop.

Prof. Cook's information (page 296) may be misleading as to the amount of rain necessary to produce a good crop of honey. Fifteen inches is probably about right for his locality, but there are localities and localities. I am situated about 50 miles northwest of him, and averaged 226 pounds of extracted honey per colony with 12½ inches. There are bee-keepers within 20 miles of me who would starve to death on 15 inches of rain, while there are others

closer than that who are assured of a fair crop, or even 8 or 10 inches.

Much depends upon the nature of the range as to what amount of rainfall is necessary. A buckwheat range is about worthless with less than 15 to 20 inches, while a sage range may produce a fair surplus on less than 10 inches, provided the rain is properly distributed over the season.

With me, the rainfall so far this season is less than 6 inches, and I don't look for much more. So you see prospects are not very bright.

C. H. CLAYTON.

Lang, Calif., March 12.

Gathering Honey and Pollen.

The spring is about a month earlier than common. My bees are bringing in some pollen, and a little honey from the sap of the box-elder.

O. H. STEVENS.

Elk Point, S. Dak., March 15.

Looks for a Big Honey Year.

Bees came out extra strong, and are breeding fast. I put 126 colonies into winter quarters, and have 119 strong ones now. I am looking for a big year for honey.

J. R. BELLAMY.

Black Bank, Ont., March 17.

Bees Seem to be All Right.

My bees mostly died last spring—I saved only one colony out of 11, and I bought one more, and now I have 5 good colonies. They seem to be all right at this time, as I let them have a good flight for 3 or 4 days.

J. A. WHITE.

Pewaukee, Wis., March 16.

Everything Appears Encouraging.

My bees have wintered extra well this winter. I put in 32 colonies last fall, and put them out on March 12th, all in good condition, without exception. I winter my bees in the cellar. I did not get much surplus honey last year, on account of drouth. I hope we will have a good season this year. White clover looks fine, and everything appears to be encouraging.

W. P. ODENDAHL.

Moline, Ills., March 14.

Learned Many Useful Lessons.

My husband and I read the BEE JOURNAL carefully each week. We have two strong colonies of hybrids, and I have just sent an order for a queen and a pound of bees. I have learned so many useful lessons through the BEE JOURNAL, for which I thank you.

MRS. JULIA CANNON.

Wabash, Ind., March 21.

Have You Read the wonderful Premium offer on page 389?